

## 11. ON SITANA LIZARD IN KALAKAD SANCTUARY

In Kannupulisaragam of Valliyur section of Kalakad Sanctuary on the road and boundary between the Kanyakumari and Tirunelveli Districts, the Sitana lizard or Fanthroated lizard *Sitana ponticeriana* is very common. The area is generally rocky all over with thorny bushes of *Acacia planifrons*, *Euphorbia randia* etc. Only about 30% of the ground is covered with vegetation. Here there is a large concentration of the lizards. In May 1980 I did a count of the lizards on 2 days in an area of 1000 m x 100 m using pocket

compass and tape and dividing the area in 100 m<sup>2</sup>. There were in all 82 lizards 35 pairs and 12 individuals. Each pair moved within small area of about 30 m<sup>2</sup>. When chased out of this area they returned back. The bluish red dewlap was exhibited by the male from small rocks. They were not seen on rocks higher than about 1m. Dr. Rajendran says that they climb trees and bushes though I have not seen any climbing trees. This lizard is not common in other parts of the Sanctuary. I have not seen it in Mundanthurai Sanctuary.

WILDLIFE WARDEN,  
MUDUMALAI WILDLIFE SANCTURY,  
TEMPLETON COTTAGE, VANNAPET,  
UDHAGAMANDALAM 643 001,  
TAMIL NADU,  
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J. MANGALRAJ JOHNSON

## 12. ON A NEW RECORD OF THE GENUS *GNATHOLEPIS* BLEEKER (GOBIIDAE, TELEOSTEI) FROM SOUTH-WEST COAST OF INDIA

(With three text-figures)

### INTRODUCTION

Neither Day (1889) nor Koumans (1941) recorded any member of the genus *Gnatholepis* from Indian waters. Herre (1927) in his account of the gobies of the Philippines and the China sea described 7 species of the genus of which 5 were later synonymised with *Acenrogobius* spp. by Koumans (1953). Koumans (op. cit.) described three species of the genus from the Indo-Australian Archipelago namely *G. balliurus* (C. & V.), *G. calliurus* (J. & S.) and *G. anjerensis* (Blkr.). All the above species were recorded east of Singapore. How-

ever Smith (1959) recorded *G. balliurus* (C. & V.) from the Western Indian ocean. In an extensive collection to study the taxonomy of gobiid fishes from the South-west coast of India an apparently strange specimen was collected which on detailed studies, in its characters with *G. calliurus*, a species not so far recorded from Indian waters.

### METHODS

Measurements to the nearest millimetre, were made following the criteria of Hubbs & Lagler (1964). The body measurements were then converted into percentages of standard

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length while those of head region into percentages of head length. The meristic data were collected following Koumans (1953). The last ray of second dorsal and anal, though double, was counted as one. The cephalic sensory canals and open pores were studied blowing air or injecting water-soluble

ink into them. The terminology for the sensory canals and pores are those of Akihito & Meguro (1975) and Macdonald (1972) respectively. The pit organs (sensory papillae) were examined under low power binocular microscope after light staining with alizarin

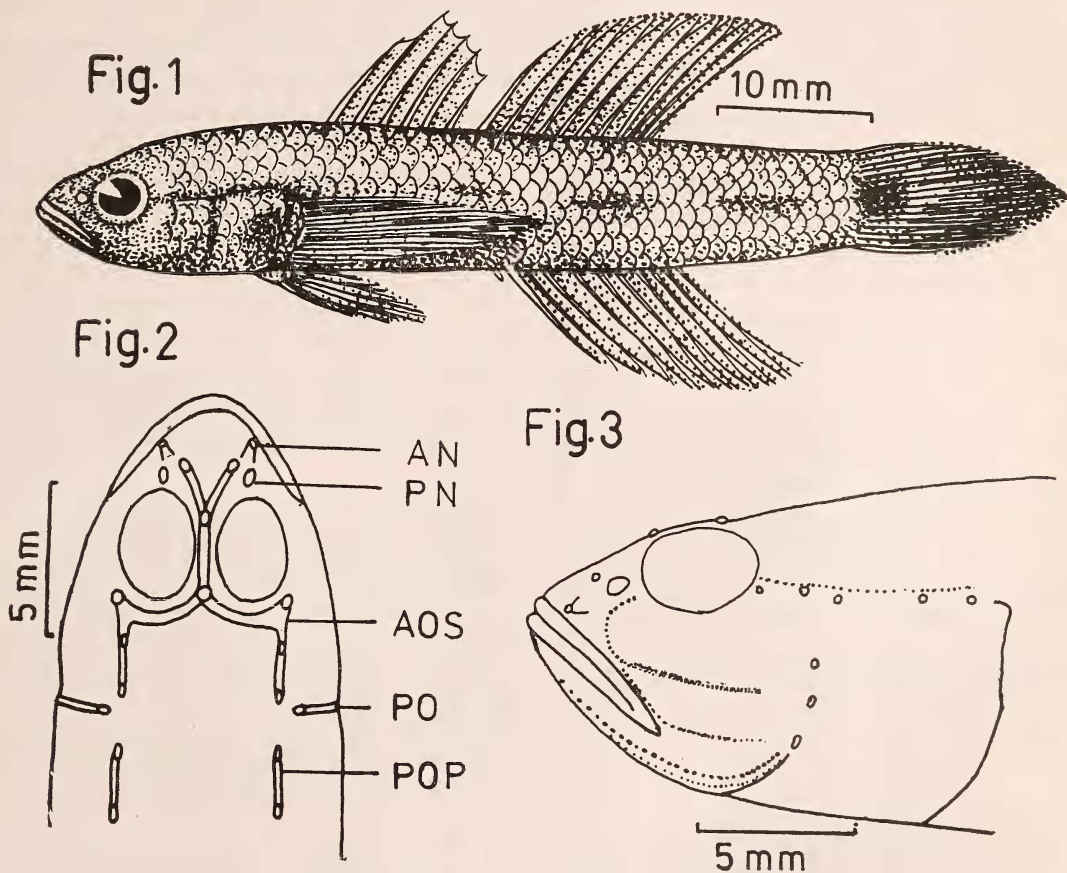


Fig. 1. *Gnatholepis calliurus* (Jordan & Seale) (Male)

Fig. 2. Dorsal view of the head of *G. calliurus* showing the pattern of arrangement of the sensory canals and open pores.

Abbreviations

AN, Anterior nostril; AOS, Anterior oculoscapular canal; PN, posterior nostril; PO, Preopercular canal; POP, posterior oculoscapular canal.

Fig. 3. Lateral view of the head of *G. calliurus* showing the sensory pores and pit organs.

red. The description of the pit organs is mainly restricted to illustrations.

**Gnatholepis calliurus** Jordan & Seale (Fig. 1)

*Gnatholepis calliurus* Jordan & Seale, 1905, p. 796; Chabanaud, 1923, p. 559; Herre, 1927, p. 130; Koumans, 1941, p. 123; 1953, p. 171.

*Material*: Single specimen (M) of 5.40 cm, Standard length (SL) (6.80 cm Total length).

1) *General description*:

Body elongate and compressed. Dorsal and ventral profiles convex. Depth of body 16.67%, caudal peduncle length 25.93% and depth 12.96% of SL. Body length from snout tip to first dorsal 37.04%, to second dorsal, 51.85%, to pelvic base, 31.48% and to anal opening, 55.56% of SL.

Head compressed, dorsal profile convex, length 31.48%, width 16.67% and depth, 18.52% of SL. Snout obtuse, length, 23.53% and height at the anterior margin of the orbit, 32.35% of head length. Eyes dorso-lateral, diameter, 23.53% and interorbital, 5.88% of head length, the latter about 1/4 the former. Head without tentacles or spines. Anterior pair of nostrils mounted on very short tubes.

Mouth oblique, lower jaw prominent, lips thin, cheeks not conspicuously inflated. Maxillary extends to below the anterior margin of eye. Gill opening continued anteriorly; isthmus narrow.

2) *Teeth*:

Teeth in several rows on both jaws. Outer row of teeth on both jaws enlarged and inner rows smaller. Outer row of teeth on upper jaw widely spaced, about 18 on each side, many caninoid. Innermost row also slightly enlarged. On lower jaw outer row of about 13 teeth on each side does not extend the whole length of the jaw laterally, but stops short by a small distance. The last pair of

teeth, not canines. The inner rows extend the whole length of the jaw. Tongue truncate.

3) *Fins*:

First dorsal longer than body, made of 6 flexible spines. Middle rays longer, second the longest, 19.44% of SL. Length of fin at base 13.89% SL. Interspace between dorsals very small, 2.78% of SL., with two median scales. Second dorsal and anal similar, both posteriorly pointed, posterior rays longer and as high as body. Second dorsal composed of one spine and 10 branched rays. Length of the fin at base 22.22% and the longest ray, 18.52% of SL. Anal with one spine and 9 branched rays. Length of anal at base 19.44% and the longest ray, 18.52% of SL. Pelvic single, obtuse, 24.07% of SL, with one spine and 5 branched rays on each side. Pectoral obtusely pointed, 31.48% of SL composed of 17 rays. Caudal obtusely rounded, 25.93% of SL, formed of 17 segmented rays.

4) *Scales*:

Head with large cycloid scales dorsally, behind the eyes, on opercle (3 rows), cheek and pectoral base. Scales on anterior part of body, breast and belly cycloid, thin and shed easily and the rest ctenoid. Scales on body large and arranged in definite rows.

L.1. 25; Ltr. 8; Pr. S (Predorsal scales). 10; Po. S (Postdorsal median scales).

5) *Branchiostegals*:5

6) *Cephalic-lateralis system*: (Figs. 2 and 3)

All the three usual canals are present. The anterior oculo-scapular canals on either side join together in the inter-orbital region and the single median canal opens anteriorly and posteriorly by the respective inter-orbital pores. From the anterior inter-orbital pore the canals

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separate and run anteriorly, one on either side to open by the single nasal pore situated slightly mesially in between the two nostrils. There is no post-orbital pore and the canal from the posterior inter-orbital pore opens laterally to the post-infraorbital pore, which in turn continues posteriorly and opens by the two lateral pores on each side. The posterior oculo-scapular canal, which is short, has the anterior and posterior pores and the pre-opercular canal has the dorsal, middle and ventral pores as is typical in gobiid fishes.

The pit organs are not distinct as the cheek and opercle are scaled. In between the rows of scales a few longitudinal lines are however evident over the cheek and there are no transverse lines.

7) *Colour Pattern*: (Freshly preserved specimens)

Body greyish yellow with uniformly distributed spots and greyish markings on the dorsal part and yellowish white ventrally. Inter-orbital and snout dark. A roughly triangular, black blotch over opercle. A black mark on the caudal base, anterior to which, and on the midlateral line, there are one or two indistinct black patches.

Dorsal and anal greyish yellow, with irregular small black spots all over. Pelvic yellowish, with dark spots in the central region. Pectoral slightly greyish yellow, with irregular grey spots. Caudal darker without bands.

8) *Habitat*:

Specimens studied were collected from the estuary at Neendakara near Quilon on the Kerala coast.

DEPT. OF AQUATIC BIOLOGY AND FISHERIES,  
UNIVERSITY OF KERALA, BEACH P.O.,  
TRIVANDRUM 695007, KERALA,  
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9) *Distribution*:

According to Koumans (1953), the fish is known from Singapore, Indonesia and East Indian Archipelago.

REMARKS

The genus *Gnatholepis* Bleeker is recorded for the first time from Indian waters. The characters of the present specimen of *G. calliurus* agree closely with those given by Herre (1927) and Koumans (1953). The more important differences are the following.

|                          | Herre<br>(1927)                           | Koumans<br>(1953)                  | Specimen<br>described                       |
|--------------------------|---|------------------------------------|---|
| Height of the body in SL | 4.50—4.83                                 | 4.50—5.00                          | 6.00  |
| Eye in head length       | 3.50—4.00                                 | 3.50—4.00                          | 4.30  |
| Interorbital in eye      | 5.00                                      | —                                  | 4.00  |
| Maxillary                | extends to below the anterior part of eye | extends to below the middle of eye | extends to below the anterior margin of eye |
| Tongue                   | rounded                                   | rounded                            | truncate                                    |
| L.1.                     | 28—30                                     | 28—30                              | 25  |
| L. tr.                   | 10  | 10                                 | 8   |

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C. GEEVARGHESE  
P. A. JOHN

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13. A NEW RECORD OF *EPINEPHELUS GUAZA* (LINNAEUS, 1758) (SERRANIDAE: PISCES) FROM INDIAN WATERS

INTRODUCTION

While carrying out a survey on the biota represented in the rockpools off Visakhapatnam coast, an interesting species of serranid fish belonging to the genus *Epinephelus* was collected. *E. quaza* was described earlier by Smith (1961) and Smith, C. L. (1971) from South Africa and America. The species is being recorded for the first time from Indian waters and hence a short description is given.

MATERIAL AND METHODS

Collection of fishes was done using a hand net of 0.6 m diameter. In taking the morphometric data, a measuring board, a dial as well as a Vernier Callipers were used and the methodology of Hubbs & Lagler (1958) was followed.

The data is based on a female specimen measuring 200 mm in standard length, collected on 6-2-1980.

DESCRIPTION

Counts: D XI, 16; A III, 8; p. 18; V I, 5;

C 13; gillrakers 8+1+15; lateral line scales 60; 1. tr. 14/1/29.

As percentage of standard length: total length 125.00; body depth 75.00; head length 42.00; snout 9.00; eye diameter 6.00; inter-orbital 4.50; pectoral length 23.50; ventral length 18.00; caudal peduncle length 12.00; distance to dorsal 33.0, to anal 75.0, to pectoral 35.0, to ventral 39.0.

As percentage of head length: snout 21.43; eye diameter 14.29; inter-orbital 10.71.

Body oblong, slightly compressed, deepest under the origin of dorsal. Cycloid scales on anterior half of body and upper and lower parts of flanks, rest of the body with ctenoid scales; mouth oblique, gape large, lower jaw slightly projecting; maxilla large reaching below the hind margin of eye; nostrils round, posterior one larger. Eyes large. Teeth pointed and small, in 3-4 rows on upper jaw, outermost row of teeth slightly bigger, one tooth on either side of symphysis enlarged, two rows of teeth on lower jaw, two on each side of symphysis enlarged; arrow-head shaped patch of teeth on vomer, 3-4 rows of teeth on pala-